# Prestonwood Forest Utility District Water Sources

**Since the development of Prestonwood Forest subdivision our drinking water has come from two wells drilled into a major aquifer system underlying most of the Houston area. Typically these wells have provided up to one million gallons of water a day during peak demand. However, with the realization of significant subsidence in the Houston area it has been mandatory that all water entities in the area convert to surface water. Subsidence is a significant problem even in our area. The Fm-249 and Fm-1960 area has subsidence of about four feet. A regional map of area subsidence can be found at http://mapper.subsidence.org/Static%20Maps/SubsidenceMap1906-2000.pdf.**

**To minimize subsidence the area needs to stop pumping water from underground aquifers and begin using surface water. The city of Houston has already begun to do this. Currently the city of Houston obtains about 80% of its water from surface sources. Beginning in early 2011, Prestonwood transitioned from 100% ground water to about 30% surface water and 70% ground water. By 2020 we will need to be on 70% surface water and by 2030 we will jump to 80% surface water. All of this transition takes time and money and is financed by the fees water customers pay to the Northwest Harris County Regional Water Authority (NHCRWA). For Prestonwood Forest Utility District Customers the fee is currently $2.00 per thousand gallons of water. This fee is subject to change and may increase in the future.**

**This surface water that NWHCRWA uses comes from Lake Houston via Lake Conroe. Water is drawn from Lake Houston by the city of Houston's northeast water plant, treated, and 31 million gallons a day are delivered to the North Harris County Regional Water Authority's Spears Road plant. From here it is delivered through a pipe line system to various water districts in north Houston. Prestonwood Forest Utility District receives about 300,000 gallons each day. This volume is supplemented by water from our two wells, treated, and distributed to customers in the district. As we began to use more and more surface water the city of Houston will expand their NE water plant to accommodate the increased volumes to NHCRWA.**

**The city of Houston has planned for future water supplies beginning back in the early 1950s. The city currently has water rights to 100% of Lake Houston, and 70% of Lake Conroe and 70% of Lake Livingston. They currently take water from the Trinity River for the Southeast Water Plant as part of their Lake Livingston water rights. In addition, a future project called Luce Bayou (named for its proximity to Luce Bayou) will divert some 300 million gallons of water a day from the Trinity River to the city of Houston's Northeast Water Plant. From this total, up to 159 million gallons of water a day will be sold to**

**NHCRWA and support surface water conversion and growth in north Harris County. The Luce Bayou is projected to begin deliveries to NHCRWA on July 1, 2019.**

**While normal rainfall in Houston is about 47 inches per year, from 1951 through 1957 the average rainfall in the Houston area was only 36 inches and other parts of Texas were even more severely limited. From 2002 to 2010 the Houston area averaged about 53 inches of rain a year, well above normal. But over the last three years we have been below normal by one inch, 5 inches, and 25 inches (2011 so far).**

**For 2011, the total rainfall so far is significantly lower than any previous year. With this lower rainfall level, lakes and aquifers are not being recharged as in the past. While we hope that "normal" conditions might return next year, the forecast is for a warmer and drier winter and probably another very dry summer. We may have to get use to dead trees and brown lawns, something that will surely challenge us all.**

**When you read about Lake Conroe or Lake Houston being lower than normal it is because of the drought and because of the conversion to surface water in the Houston area. And it's also a warning that water usage and costs are going to be different in the future. Today, Lake Conroe is down about 10 feet from normal levels. This doesn't sound like much for a lake 200 feet deep, but 10 feet off the top of Lake Conroe reduces the total volume of the lake by 40%. Furthermore, with lower rainfall levels our lakes are being used up and water tables in the aquifers are also dropping.**

**We need to think seriously about water usage during the coming months. Part of this will certainly be some type of water restrictions. Even though the water district has adequate water resources it doesn't mean we can use water indiscriminately for any and all purposes. We want to encourage water conservation and through a combination of education, restrictions, and costs we hope to reduce both ground water usage and overall total water demand.**